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ABSTRACT

An overview of recent literature on changes in the nature and patterns of work and their implications for vocational education and training (VET) is offered. Changes in the nature and patterns of work present significant challenges to the VET sector. More women have entered the work force; unemployment has reemerged as a significant factor; increasing numbers of workers are employed under part-time and casual arrangements; employment has shifted across industries with declining jobs in manufacturing and increases in service industries; and the work force is less unionized. Knowledge has become a significant new form of capital and businesses are increasingly recognizing its value. Changing work patterns may also alter traditional patterns of living, as work and time outside of work become blurred. Diversity and creativity are needed in responses at all levels of the VET system, from national policy to program provision at the grass-roots level. Managing the needs of diverse clients represents one key tension in VET; managing the tension between overarching national (or state) policy frameworks and more localized needs and concerns is another. Current moves to develop and promote national training packages may provide a means to address the diversity of apparent needs. A paradigm shift is required--from a focus on predetermined content for delivery to an emphasis on effective dialogue with the stakeholders on designs for effective learning. Four areas for further investigation have been identified: developing learning communities, collective competence, workplace learning, and implications for VET work. (Contains 54 references.) (YLB)

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The changing nature and patterns of work and implications for VET

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Executive summary

THIS REVIEW OFFERS an overview of recent literature on changes in the nature and patterns of work and their implications for vocational education and training (VET). As a service industry, VET faces the double bind of coping with these changes and simultaneously providing high quality goods and services to help other industries to do so. It is apparent that the changing nature and patterns of work present significant challenges to the VET sector. The complexity and ambiguity of changes suggest that the resulting challenges are unlikely to be addressed effectively through simplistic strategies or universal policies. The requirements of multiple stakeholders and regional/local communities need to be taken into account.

The changing nature of work

Changes in the nature and patterns of work are not easily captured in a single frame of reference. There are shifts occurring in the nature of work itself and in the composition of the workforce. Looking at the structure of the workforce as a whole, it can be noted that:

- the workforce has become more 'feminised' through shifting patterns of participation for men and women
- unemployment has re-emerged as a significant factor
- there are increasing numbers of workers employed under part-time and casual arrangements
- employment has shifted across industries with declining jobs in manufacturing and increases in service industries
- the workforce is less unionised

The review notes that the universality of the full-time permanent job, usually held by the male breadwinner of the family, is increasingly a thing of the past.

Although many people still think of this as the norm, such positions now tend to be held by a relatively privileged minority. Instead, there is evolving a more fragmented labour market characterised by a new distribution of paid work, in which the jobs of many people are precarious while those with full-time jobs find themselves working longer hours.

These shifts constitute a complex restructuring of the world of work. However, the picture is not so homogeneous. The broad generalisations may not hold true for particular industries or within particular circumstances.

It appears that knowledge has become a significant new form of capital and businesses are increasingly recognising its value. Some researchers link knowledge and its generation to innovation and competitive advantage—thus highlighting the significance of learning for work, learning at work and learning about work.

The changes affecting workplaces have generated mixed blessings for workers. In some cases the calls for 'working smarter' have manifested as the darker side of workplace reform. Work has been intensified as calls to do more with less become almost universal; sustained (or increased) production with fewer workers; better quality in shorter time; zero waste and zero defects. The tenets of lean production have spread from manufacturing industry into other sectors of the economy.

Changing work patterns may also alter traditional patterns of living, as work and time out of work become blurred. In some cases the boundaries are almost completely broken down, as home becomes the place of work.

Implications for VET

This review suggests the need for diversity and creativity in responses at all levels of the VET system, from national policy through to program provision at the grass-roots level. The complexity and lack of consistency also suggest the need for tolerance of difference and, at times, contradiction. These may be difficult qualities to maintain at the policy level.

The literature suggests the importance of recognising that there are multiple clients or stakeholders involved with VET. Successful programs appear to be characterised by their ability to address simultaneously the needs of these multiple clients. It may be noted that at times the needs of the diverse clients

may contradict one another. In such cases negotiation and mediation skills become very important.

If managing the needs of diverse clients represents one key tension in VET, then managing the tension between overarching national (or State) policy frameworks and more localised needs and concerns is another. This review suggests the importance of regional frameworks and initiatives to connect VET with local and community development networks.

Finally, the review suggests that current moves to develop and promote national training packages with both endorsed and non-endorsed components may provide a means to address the diversity of apparent needs. For this to happen, however, a paradigm shift is required; from a focus on predetermined content for delivery to an emphasis on effective dialogue with the stakeholders on designs for effective learning.

Directions for further research

The review has identified four areas for further investigation. In brief, these are summarised as follows.

Developing learning communities

This topic suggests the importance of questions about the nature of communities and their capacity to manage change, particularly in the context of the prevailing market philosophies. What characterises an effective learning community and how might such communities be developed? How can regional, local and community needs be identified and expressed as 'demand' in ways which will stimulate appropriate 'supply' in the VET market? What are the resource and policy implications?

Collective competence

The VET system has placed considerable emphasis upon an individualistic approach to competence. However, it may be that group or collective competence is even more important. Collective competence implies a range of skills within a group and the group's ability to identify and harness effectively the particular skills (or groups of skills) for any given circumstance. Is it possible to identify the features of collective competence in action? How is it manifested in various settings, such as communities and workplaces? What is

the relationship between individual competencies and group, or collective, performance?

Workplace learning

Despite recent useful work in this field there is a need to further investigate how Australian workplaces function as learning environments. What stimulates and sustains effective organisational and collective learning at enterprise level and what are the barriers? How might the barriers be best overcome? Such investigations would also shed more light on what appears to be a significant issue—the nature of informal, incidental and opportunistic learning, and that based on critical incidents within the workplace.

Implications for VET work

It is not yet clear how wider trends and changes in the labour market are going to affect VET as an industry. Is there a relationship between the quality of VET programs and the modes of employment of teachers? What will be the long-term effect of trends towards casualisation of VET teachers' employment? Is there evidence of work intensification in the VET sector; how is it manifested? What are its implications?

Context

THE FIELD OF literature addressed in this review is broad and rich with ideas and argument. For instance, vigorous academic debate continues to flow around conceptions such as competence (Stevenson 1993, 1996; Darrah 1994) and literacy (Cope & Kalantzis 1995; New London Group 1996). These concepts have been incorporated into the VET agenda in a way that views them as unproblematic. However, what literacy or competence might mean in a workplace may be critical to the development of effective VET programs. The scope of this study does not allow exploration of such debates.

The review is framed by the development of what Gee and Lankshear (1995) have dubbed 'fast capitalism'. Summarising a range of popular writers on business, organisational development and marketing, they note how the world of work has changed, in some cases quite radically. In the 'new work order', they argue, traditional hierarchies are collapsed and workers are transformed into 'partners' and 'associates'. Such workers are expected to be highly motivated, self-managing and personally committed to their work. They should be willing and able to communicate their needs and their knowledge and continuously to improve their performance. At the same time, of course, they must be willing to accept responsibility for their own careers and move on when their services are no longer required.

It should be noted that such a new work order is not universally or consistently apparent. It represents a vision of the way some people would prefer the world to be, rather than the way it is presently. Nevertheless, these trends do have significant implications for VET. Added to these shifts is the requirement for VET policy-makers and practitioners to think on their feet and react quickly. The world of fast capitalism is one in which everything moves quickly. Peters (1994, p.6) describes circumstances in which decision-makers consider ten minutes to be a 'long-term' timeframe. Gee et al. (1996, pp.68–71) have also used the metaphor of carnival to characterise fast capitalism. Bright

and colourful, the carnival has great energy and music, it is a moving feast for the eye. Yet it lives only for the moment, it is constantly moving on. VET does not stand outside this paradigm (see Gee 1994; Kell 1997).

It is within this context of social change at many levels that this literature review attempts to offer a helpful overview and some points of reference. This review makes no attempt to reconcile the contradictions or resolve the often complex issues identified. It commences with an overview of findings on the changing nature and patterns of work. It then considers the training arrangements and policies developing in response, touching upon national, State, regional and training provider perspectives. There follows some discussion on educational practices in response to these new times. The final chapter offers some analysis and commentary and comments on further research.

The changing nature and patterns of work

MAKING SENSE OF the changing nature of work in Australia is not an easy task as there are great differences from industry to industry, from location to location and in people's expectations and experiences in their working lives. However, in recent years a range of insights has emerged from research that provides a useful basis for addressing these issues. This section begins with an overview of who it is that now comprises the Australian workforce and then discusses a number of significant broad changes which have occurred in the structure of industry, employment and in the nature of work itself.

Structure of the labour force and of working life

The dramatic shifts in the patterns of paid work over the last 25 years have attracted a great deal of research attention. This work has been summarised by MacNeill (1995), who reported the following:

- Participation in the labour market has changed dramatically. The labour force participation rate of men fell from 87.6 per cent in 1947 to 73.5 per cent in 1994; in the same period, that for women increased from 25.1 per cent to 52.4 per cent and, for married women, the participation rate rose, astonishingly, from 6.4 per cent to 53.8 per cent.
- Unemployment has re-emerged as a key feature of the labour market; in 1966, unemployment stood at just 1.8 per cent, but by 1994 it had increased to 9.5 per cent.
- The growth of unemployment has been accompanied also by a rise in *under*-employment. Apart from those dropping out of the formal labour market, large numbers of part-time workers are working fewer hours than they would prefer. By 1998, 36 per cent of male part-time workers

(nearly 200 000 men) wanted to work more hours, as did 22.4 per cent of female part-time workers (some 349 000 women; see ABS 1998b).

- The *type* of paid work has fundamentally changed. Between 1966 and 1994, part-time employment rose from just 10 per cent of total employment, to 24 per cent. Of these workers, many would prefer to work longer hours if these were available—in 1994, 28.4 per cent of all part-time workers expressed this preference, a figure double that of 1978.
- The model of full-time, permanent work has also been undermined by 'casualisation'. Permanent jobs fell from 80.2 per cent of the total jobs pool in 1986, to 77.3 per cent in 1993; casual jobs thus increased from 19.8 per cent to 22.7 per cent over the same period, many of them becoming both casual *and* part time. While women hold the majority of casual jobs, this type of work has replaced full-time work as the entry point to the paid labour market for many young people.
- The distribution of employment across *industry sectors* has altered, with the decline of manufacturing as a site of employment. By 1993, the services sector (broadly defined), provided 79.2 per cent of the available jobs, and manufacturing just 14.3 per cent.
- The *scale* of the enterprise or organisation in which employment is found has changed also. Self-employment grew by 255 000 people between 1986 and 1993; the number of employees working for firms employing fewer than 20 people increased from 1 271 000 to 1 509 000 over the same period, while organisations employing more than 100 people shed some 7000 jobs. The growing importance of smaller enterprises is related to shifts in industry composition, as large manufacturing plants, the public sector and the electricity, gas and water utilities 'downsize'.

- The *entry* points to the labour market for young people have changed significantly, particularly for men, as low-skill jobs in 'heavy industry' have been reduced. The labour force participation rate of men aged between 15–19 fell from 81.1 per cent in 1947, to 55.1 per cent in 1993.
- The 'employment chain' is lengthening, as organisations in both the public and private sector 'outsource' their 'non-core' activities. This phenomenon takes many forms, from the growth of outwork in the clothing industry, to the emergence of labour hire companies. In both cases, workers may no longer be employed directly by the organisation for whom the work is actually performed.

- The level of membership of Australian unions has declined significantly, to the stage where less than one in three of the Australian workforce is a member of a trade union.

Since 1993, these trends have continued, although there has also been a slight decline in levels of unemployment. By 1996, the labour force participation rate of males had dropped further to 73.3 per cent and female participation rate had increased to 53.4 per cent. Overall, the labour force participation rate had increased to 63.2 per cent. By the end of 1997, monthly unemployment figures were moving between 8.0 and 8.5 per cent. Unemployment is not distributed evenly: there are sharp disparities across regions and age groups (see ABS 1998a).

Overall then, we are observing the decline of the full-time, '9–5', permanent job held by a man, as the 'model' labour market experience. In its place, there is a much more fragmented labour market, characterised by a new distribution of paid work in which the jobs of many people are 'precarious', while those with full-time jobs find themselves working longer hours (see Campbell 1996). Changes in industrial relations legislation by both federal and State governments have facilitated these labour market trends. In particular, the decentralisation of bargaining over wages and conditions has been intended to promote greater labour market 'flexibility'.

Despite the expectations that overall working hours will reduce in the future, recent bargaining between enterprises and unions has resulted in increasing levels of shift work, as organisations search for ways of improving productivity. Sometimes, this development has involved working a normal range of hours over fewer days in the week, but in others it has led to a significant extension in working hours (albeit in place of overtime arrangements in some industries). In less well-unionised workplaces, employers have extended the concept of the 12-hour span of work, in which workers might be expected to be available to work (and be paid for) only a specific and variable number of hours within the span. This provides the employer with greater flexibility in using people when there is high demand, but means that employees have less certainty about their wages and hours of work, making it particularly difficult for people with family responsibilities (see Probert & Macdonald 1996).

There are, of course, enormous differences between large and small firms and between different sectors of the economy, and in the experience of working in

these different types of workplaces. The modern, highly automated factory that Ford operates at Broadmeadows, on the outskirts of Melbourne, provides a picture in sharp contrast to the local milk bar, or to an inner suburban sweatshop. The extent to which generalisations can be made across the workforce as a whole is very limited.

In what follows, 'workplace' is used here to refer to the public world of paid employment and should not imply any denigration of the work that is undertaken in the private and domestic world of one's own home. This distinction remains important even though one of the interesting consequences of new technologies is the possibility that an increasing number of people may be able to engage in paid employment while remaining at home. The 'sole occupied home office' (SOHO) is a growing part of the landscape of paid employment and represents a 'white collar' parallel to the experience of many workers involved in outworking in, for example, the textiles and child-care industries. It generates further questions about workplace relationships, occupational health and safety and industrial relations, particularly for workers who previously might have been employed in large offices (see Odgers 1994).

These trends represent a complex restructuring of the world of work, involving much more fragmentation in working life for some than has typically occurred while, for others, there is greater intensification; some workers have experienced both! More than ever, the world of work dominates some people's lives. These patterns reflect new developments in the shape of industry sectors and in the nature of work itself, as industry sectors have adapted to competitive pressures and adopted new forms of technology.

Knowledge as a new form of 'capital'

The Australian economy during the 1960s and 1970s was dependent on the export of primary commodities and the maintenance of a manufacturing industry that produced essentially for a limited domestic market, protected by tariffs and quotas. During this period there was only limited investment in the new technologies which could have enhanced international competitiveness, so that new employment was generated in community services and administration rather than in either manufacturing or agriculture. During the 1980s, there was particular growth in financial and business services.

During the late 1970s and early 1980s, it became apparent that the important developments were occurring internationally in manufacturing, together with the growing instability in the prices for commodities. This led many people to believe that substantial and sustained changes in production methods and in organisational relationships were needed if the Australian economy was to generate sufficient export income to meet the demand for foreign goods and maintenance of living standards. This was reinforced by decisions in the late 1980s to reduce greatly the protection of the domestic market from international competition (see Sheehan et al. 1995).

In this context, sophisticated new technologies have become a central feature of our times. These technologies represent the culmination of several phases of development within industrial society. In particular, micro-electronics and faster communications have led to greatly reduced costs and increased the accessibility of accurate and timely information (see OECD 1988). Employment in the information technology industry increased by 49 per cent in just three years to 1996. However, over two-thirds of these jobs were taken by men (see ABS 1998d). A further complexity in the issues surrounding new technologies is that the rate of technological innovation has declined in the early 1990s. Between 1991–94, 32 per cent of Australia's 55 000 manufacturing companies undertook some kind of technological innovation; between 1994–97, only 26 per cent did so. This was mainly because small firms, employing fewer than ten people, could not keep up their innovative performance. The importance of training in technological innovation is also very low in manufacturing: between 1994–97, just three per cent of innovation expenditure was devoted to the training associated with it (see ABS 1998c).

Until recent years, much of the debate about the *economic* impact of new technologies was limited by a conceptualisation of 'productivity' in terms of the value of output per worker. Whilst these analyses suggested that increased education levels produced greater productivity and, hence, profitability, most of the relevant research has focussed on aggregate trends; little attention has been given to analysing how the worker's knowledge and skill actually enhanced the value of the output. Nor has there been any great advance in explaining the relationship between skills formation, investment in information technologies and productivity (except perhaps for OECD 1988).

It is now apparent that knowledge has become an increasingly important form of capital. As Drucker has put it:

> *Knowledge is the only meaningful resource today. The traditional factors of production—land, labour and capital—have not disappeared, but they have become secondary. They can be obtained, and obtained easily, providing there is knowledge.* (Drucker 1993, p.38)

Johnston made similar comments when commenting on the bases of competitive advantage in the emerging global economy. In his view, the most important competitive resource is the ability to learn faster than others and to implement appropriate action based on that learning (Johnston 1993, cited in Lepani 1994, p.25).

The process of environmental intelligence, reading the signals of the 'market' and understanding their strategic implications and commercial possibilities, is a key element of the 'learning' to which Johnston (1993) and business leaders such as Arie de Geus (from Royal Dutch Shell) refer. It is a matter of being outward looking and capable of reading the signs in the external environment as much as it is of having effective internal research and development and production processes. However, the external orientation needs to be complemented by appropriate arrangements for learning, and for acting on learning, within the organisation itself.

In this context, the concept of 'learning' has a variety of dimensions that need to be distinguished. In the first place, there is an important distinction to be drawn between the workplace-based learning opportunities provided for individuals and more collective forms of learning. Whilst individual learning might focus on employees learning how to do their jobs, or how to contribute more generally within an organisation, collective approaches to learning are likely to be related to practical operations, organisational systems or to strategic decision-making. Individual work-based learning can include formal training classes or tutorials, self-paced learning packages, or more unstructured practices, which involve imitation and trial and error, supported sometimes by mentoring or coaching. Collective learning, on the other hand, is sustained through self-managing teams, project groups, participative workshops, steering committees and the use of new forms of document-sharing technologies, often framed around perceived problems.

Recent Japanese research has suggested that collective learning is particularly important in generating the kind of knowledge necessary for successful innovation. Nonaka and Takeuchi (1995) have argued that continuous innovation is the result of a dual process including internal assessment of

future trends and opportunities, together with accumulation of knowledge from external sources. In their view Japanese companies have a different understanding of knowledge, distinguishing the tacit and the explicit. The tacit includes both technical 'know-how' and beliefs and perspectives, images of reality, while explicit knowledge encompasses the formal and systematic, that which can be communicated as universal principles or codified procedures. Tacit knowledge is not easily communicated, is learned from direct experience, through both mind and body, and involves paying attention to the less formal and systematic side of knowledge. In essence, Japanese companies create new knowledge through *'the conversion of tacit knowledge to explicit knowledge'* (Nonaka & Takeuchi 1995, p.11; italics in the original).

The emphasis on new forms of knowledge as capital has led to various forms of workplace change in Australia, in which the development and application of knowledge about markets and production processes has become an important part of management thinking.

Workplace change

Over the last two decades, new forms of organisation and technological innovation have become crucial to maintaining rates of corporate profitability. In addition, there has been substantial effort put into restructuring the patterns of skills formation and industrial awards. Similarly, there has been growing interest in emulating the Japanese in management approach and in new production concepts such as 'just in time', 'value added manufacturing', 'quality circles' (QCs) and, ultimately, 'total quality management' (TQM). In many cases, there has been limited understanding of how to implement these strategies successfully (see Dawson & Palmer 1993). Management decision-making can also be decisive in shaping the outcomes of technological change.

> *In a number of instances, the introduction of QCs did result in greater opportunities for employee involvement and an increased management recognition of the skills of shopfloor employees. On the other hand, QCs were also commonly short-term initiatives which management disbanded after a period of experimentation.* (Wright 1994, p.26)

A study by the Centre for Educational Research and Innovation (CERI), which is linked to the Organisation for Economic Cooperation and Development (OECD), indicated that organisational choices will have a profound effect on how particular technologies will alter the requirements for particular jobs. It

emphasised the importance of considering the human resources and the consequences of work organisation as much as the technology itself. It identified a distinct trend towards team work in relation to new technologies, specifically applying the practice of linking one team/one technical system.

> *The trend towards team work puts a premium upon broadening the competence profile of the individual worker. Increased emphasis on education and training is being directed towards communication and social skills and the need to complement necessary technical skills with a more holistic view.*
>
> (OECD 1985, p.2)

The implementation of these new management and production concepts in the Australian economy has been extensive. The federally funded Best Practice Program has had a prominent profile in extending interest in TQM and teams, not only within manufacturing but also in the banking, retail, and hospitality sectors and in public utilities and in various levels of government administration.

By 1994, of more than 3000 federally registered enterprise agreements, 53 per cent contained at least one provision relating to flexible labour organisation, team work, quality assurance, continuous improvement, organisational restructuring or a new classification structure (DIR 1996, p.109). The consequences of such reforms on organisational performance, patterns of innovation and the workforce are more difficult to quantify. They are the subject of sharp disagreement in the literature. Some writers see the current trends as the forerunner of a new era of humane, democratic and productive workplaces. Others expect that workers will be subjected to a new regime of surveillance and specialised work design that will lead to fewer jobs and greater stress. (For a generally positive analysis of these changes, see the work of Mathews et al. 1993; for a more pessimistic account, see Hampson et al. 1994.)

However, the implementation of new production concepts has been patchy, and not just across different manufacturing sectors. Even within a single organisation, new work organisation arrangements have been introduced to particular divisions or parts of the business and not in others. Case study data present a picture of winners and losers amongst workers: while some have gained in skills and decision-making, others are subject to more stringent surveillance. On balance, the evidence has led Wright to conclude that:

> *. . . it appears questionable whether the application of new technologies and organisation within Australian industry have resulted in a break with previous management practice. Within a context of heightened product market competition, tariff reductions, deregulation, and privatisation, Australian employers have sought to improve labour productivity through a variety of means. Such contemporary developments reflect the broader historical desire of employers to maximise the flexibility of labour in the pursuit of profit.*
>
> (Wright 1994, p.32)

As enterprise bargaining has been extended through all industry sectors, the effectiveness of the labour movement in ensuring that all workers could benefit from the new developments became increasingly limited. This has resulted in an increasing polarisation of incomes, mediated significantly by gender and race relations; 'economic and social conditions are coming increasingly to resemble those of workers in . . . the third world' (Probert 1993, p.9).

Life has also become much harder for trade unions in responding to these developments, particularly with the adoption of the federal *Workplace Relations Act* in December 1996. The introduction of Australian Workplace Agreements (AWAs) which are individually and privately negotiated has threatened the collective dimension of workplace life, challenging the fundamental concept of solidarity. New forms of performance management and remuneration incentives have reinforced these pressures for change. Hence, unions have had to reflect carefully on their capacity to comprehend the changes occurring in the nature and organisation of capital, if they are to do any more than react *post hoc* to corporate initiatives.

These changes also present significant challenges to Australia's managers, at all levels from senior executives through to 'frontline' personnel. The Karpin report (1995) drew on a co-ordinated series of substantial research projects to highlight the importance of management education in supporting the nation's capacity to manage the challenges ahead. In particular, the Karpin report proposed that operational managers would benefit considerably from training. The VET response to this perceived need has been the development of a set of frontline management competencies. These are being implemented through the Frontline Management Initiative (FMI) in line with the concept of the new national training packages. The endorsed FMI competencies include a unit to 'facilitate and capitalise on change and innovation'. The FMI provides a

framework and evidence guides for assessing this and the other FMI competencies.

However, a focus on identification and assessment processes may ignore or beg the question about how such competencies may be grown or developed as distinct from tested. Some empirical work on workplace change suggests that managing change entails a complex set of interrelated competencies which are often contingent and social in nature. Reimer (1996) for instance cites work with pharmaceutical manufacturing enterprises making the shift from reactive maintenance strategies ('if it ain't broke don't fix it') towards more proactive approaches based on planned and preventative maintenance procedures. Even in engineering maintenance, he suggests, the key variables (and barriers) to the change process were social and cultural rather than technical.

One quite specific consequence of workplace change and poor management handling of change has been an increase in levels of stress reported by workers (see Morehead et al. 1997; Heiler 1997; O'Donnell 1997). In 1997 the Australian Council of Trade Unions (ACTU) conducted a survey which was the largest in any part of the world. Preliminary results showed that most people, whatever their job, are feeling the effects of stress at work. The leading causes of stress in the workplace included:

- poor management communication and organisation (73%)
- job insecurity and lack of career paths (65%)
- increased workload (56%)
- organisational change and restructuring (50%)
- lack of training, especially new technologies (27%) (See ACTU 1998)

The consequences of workplace change take on extra significance when the consequences of increased stress for people's lives outside work are also considered.

Trends in working life cultures

One of the significant developments of the last two decades has been the shift in the nature of workplace relationships, and in the meaning of work in people's lives. In part, this reflects issues which have been raised previously: the increased fragmentation of working time, the undermining of the collective

character of workplace life, and changing forms of work organisation related to new information and communication technologies.

One very positive dimension of the greater attention to workplace-related cultural issues has been the development of more effective strategies for managing the diversity. A range of organisations has introduced both awareness activities and specific reorganisation of their production arrangements (see Cope & Kalantzis 1997). Such changes have been prompted partly by recognition that much of the contribution which workers from different backgrounds could make was being wasted (a 'one-size-fits all' approach to organisational life) and by legislative requirements for greater equal employment opportunity.

Other major influences on people's expectations of work have been derived from the changing balance of work and family responsibilities. As women's participation in paid employment has increased, the influence of stage of life cycle has become more significant. Both men and women have been confronted by the difficulties in managing both family and career pressures. Some organisations, both large and small, have developed policies that attempt to provide flexibility for individual workers while facilitating greater productivity. Despite these initiatives, caring for children has continued to be undertaken predominantly by women; for example, women are six times more likely to take time to look after sick children than are men (see Woolcott & Glezer 1995; Probert & Macdonald 1996).

Once at the workplace, there is no question that new information and communication technologies have had great influence not only on work itself, but also on the working environment and social relations of the workplace. Zuboff's exploration of the implications of new technologies for workplaces recognised that e-mail had considerable potential to alter forms of communication and interaction within organisations, with increased probability of management surveillance (see Zuboff 1988).

Beniger (1986), for example, has argued that the rapid expansion in the use of information technology is essentially a continuing reflection of the priority placed by capitalist management on control of their employees. This issue has consequences, obviously, that go well beyond the workplace, affecting basic assumptions about political and social life. Clear differences have emerged between those who favour greater control of workers through, for example, the use of computer-based surveillance in sites such as telephone call centres (see

Wilson 1992) and those who advocate a fundamental reorientation of the cultural expectations and practices of workers and management.

It is this aspect of workplace change in which particularly complex issues arise. The interest in team work, for example, presupposes a devolution of at least some decision-making to workers, while increased forms of control are also implemented. Clement (1994) has described this in terms of a contradiction in emphasis between 'functional' and 'democratic' forms of 'empowerment'. Essentially, he has argued that despite employers' efforts to contain workers' decision-making rights, any expansion of these opportunities will lead ultimately to demands for a greater say in how organisations are run.

Taken together, there seems to be little doubt that a fundamental shift is occurring in the cultural expectations and practices of workers and management throughout the western industrialised countries. There is one other aspect of this which directly affects the relationship between work and learning.

The changing nature of work and organisational learning

Despite the limited documentation of developments in Australia, some recent studies, albeit based on limited samples of Australian companies, provide useful insights into the kinds of arrangements that might emerge in the near future. Field and Mawer (1996) conducted ten case studies in 'high performance' organisations that had prominent reputations for having 'productive work cultures'. They identified six characteristics that were common across the case study sites:

- employees had a strong commitment to organisational goals
- all the workplaces had put considerable effort into establishing clear standards for products and services
- the organisations had implemented closer integration of individuals, teams, functions and systems
- there was a lot of emphasis on flexibility
- all sites were operating under considerable pressure, with more expected in less time

- there was greater collaboration with outside organisations, including customers, suppliers, agents, and partners (See Field & Mawer 1996, pp.3–17.)

In this kind of environment, the following types of skills and expertise were seen to be essential:

- an intellectual and attitudinal core, which enabled employees to be open to new information, able to manipulate new ideas, and put forward their own suggestions, as well as being confident in adapting to new situations
- routine technical skills, such as processing forms or handling simple keyboard tasks
- generic skills, which were analysed in the framework of the key competencies
- a capacity for learning, both in the sense of reflecting on personal experience and in contributing to the learning of others
- being empowered, in the sense of being able to be active in communicating and contributing within and between teams

In their discussion of the generic skills, the use of knowledge emerged as a key resource. More generally, their data confirmed that the VET key competencies represented a 'very satisfactory list of generic skills' (1996, p.21). It seems also, however, that the framework succeeds as long as the discussion of skills remains at a relatively abstract level. When the actual performance of competency is contextualised by real work the statements of key competencies do not necessarily convey the nuances required in actual performance; Stevenson (1996) reports similar findings.

Another study focussed on the skill formation practices, policies and needs of small-to-medium enterprises which relied on 'knowledge workers' and had a significant level of exports. It concluded that despite their dependence on sophisticated research and development activities, most of these firms had paid little attention to human resource policies, seeking to rely instead on recruiting people with the 'right skills' as they were needed. This tendency limited the firm's capacity to continue to take advantage of new opportunities, once they had become established.

> *Because timing is crucial, new firms recruit externally rather than develop the needed expertise internally by investing in training to upgrade the skills of*

existing employees . . . This strategy, however, has consequences for enterprises at a later stage of their development. (Curtain 1995, p.19)

The firms in Curtain's case studies had developed links with university-based research centres which provided some evidence for the emergence of learning networks. Curtain argued that this experience ought to be used as the basis for the development of closer links between research/education institutions and the workplace. Furthermore, he suggested that there was scope for a more dynamic approach to workplace learning, based on the following propositions:

- Learners learn best by doing—by actively working on substantial problems in meaningful contexts.
- Learning is a quintessential social activity.
- The context of learning is a key determinant of what is learned and how well that learning transfers to new situations.
- Human beings are by nature sense-making creatures with a remarkable ability to learn. (Curtain 1995, p.41; see also Florida & Jenkins 1993, p.12)

Sefton et al. (1995) investigated workplace learning and change in four Australian companies that were identified as exhibiting features of so-called 'learning organisations'. Their work suggested the importance of an holisitic analysis of the workplace as a learning environment. Such an analysis goes beyond traditional notions of a training needs analysis to consider cultural and attitudinal factors, and informal opportunities for learning as well as training programs. They also highlighted the need to build strategic links between learning and change processes in the workplace as a matter of design and intention. Such links, they suggest, are neither natural nor automatic. They also found that when new ways of working are introduced, with changes in technology and work organisation, the workers with a sense of the bigger picture and well-developed analytical skills found it easier to cope.

These studies have not provided a comprehensive foundation for assessing the appropriate direction for learning to support organisational change in Australian enterprises. However, they at least demonstrate the priority which needs to be placed on better understanding of the implications of organisational and technological change for learning processes and practices (see also Field & Ford 1995).

Training arrangements, policies and processes

Key themes and issues

THE CHANGES IN the nature and patterns of work are embedded within and related to wider socio-political and economic forces. Developments within the VET system can be seen in terms of a driving imperative for effective responses to a range of socio-political and economic pressures. For instance, the shift from 'supply'-driven VET programs to market and 'demand'-driven programs embracing 'user choice' can be seen as a response to federal government policies, promoting an open training market (Marginson 1993; Anderson 1994, 1996; ANTA 1997b; Coopers & Lybrand 1996). The expansion of open, 'transparent' and competitive tendering processes can be related to the development of the open market and principles supporting the so-called 'level playing field' (Hilmer et al. 1993). The increasing number of industry-based and registered training organisations is similarly related to the developing market. The commodification of education and training services can be seen as both a consequence of, and a response to, the prevailing market philosophies driving policy development. Flexible delivery options including the adoption of 'new' technologies, such as the Victorian Virtual Campus project, and mixed-mode delivery programs are responding to the imperative for cost-effectiveness, customer demands and new markets as well as to policies aimed at enhancing client access and promoting equal opportunity (NFDT 1997). A further example is provided by the development of education as an export industry with global markets (ANTA 1997b).

Identifying the theme of responsiveness, however, begs the question about responsiveness to whom? Senior policy-makers express some disappointment and frustration at too much attention being given to issues of definition and educational philosophy (Moran 1997a, p.14; Hornery 1997, p.2). However, the way clients of the VET system are defined continues to be a key issue of concern, particularly for researchers and practitioners (Golding & Volkoff

1997b; Yeatman 1994; Sefton et al. 1994). Billett et al. (1997) conducted a comprehensive review of literature relating to the shifting context for VET for the Victorian Office of Training and Further Education. They documented emerging issues and changing relationships. Their report, which provides a substantial precedent for this review, addresses:

- industry's role
- the Victorian training system, the training market and client needs
- competency-based training and key competencies
- lifelong learning
- locating VET in the workplace
- changing contextual factors for VET
- quality assurance and training provisions
- the relationship between research and policy formation
- mutualities in the relationships among clients in VET's emerging future

Their analysis suggested that there are four interrelated sets of clients for the VET system: individuals, enterprises, industry and communities/regions. They argue the need for significant shifts in focus and strategy that they summarise as follows:

Individuals—*from* individuals as economic units *to* individuals as aspirants with personal and professional goals

Enterprises—*from* a fittedness with industry mandation and regulation *to* acknowledging a fittedness with their own unique requirements within an industry framework

Community/regions—*from* national and State-based priorities *to* negotiated regional priorities

Industry—*from* centralised prescription, mandation and control *to* facilitating individual, regional and national industry aspirations

Elsewhere Billett argues for a *mutuality of interests* amongst these four client groups. He suggests this approach as the means to developing a more fully mature VET system that is characterised by the voluntarism of the client groups' involvements. This, he argues, is a 'more appropriate goal for the next decade than the external mandation and regulation which have served the VET system so poorly in the recent past' (Billet 1998, p.8).

Stevenson argues a similar line, suggesting the need for a convergence of vocational, individual and social goals. This would:

> *. . . widen the concept of vocational (an imperative in contemporary society anyway), and enable the question of the status of vocational education to be seen in a more connected way with the status of other forms of education.*
>
> (Stevenson 1998, p.12)

McIntyre (1991) also argues against a narrowing of focus. He suggests that the needs demand 'a system of TAFE organised for openness and flexibility' (p.59).

Stevenson's reference to John Dewey, the influential American educator and liberal philosopher, is pertinent. The issues surrounding this review involve fundamental questions about the purposes of education and training, the nature and structure of society and desirable goals for public policy, private investment and community development. Exploration of these issues requires a sense of distance, an ability to ask critical questions and to challenge commonly held assumptions. See, for instance, Jackson (1997), Elsey (1990) and Jaakkola et al. (1995) or Garrick (1994) and Bagnall (1994) on the theme of post-modernism.

Responses to the changing nature and patterns of work

National perspective

The development of the national training reform agenda (NTRA) under the former federal Labor government has been documented elsewhere (Hall 1995; Sobski 1995) and will not be reiterated here. However, the more recent move to develop the National Training Framework, with training packages as its cornerstone, requires brief comment. These developments can be seen in terms of a driving imperative for responsiveness, in particular to business (Kemp 1997, p.3).

The key elements of the National Training Framework, the training packages and the new arrangements for nationally consistent recognition of training, have been linked to quality assurance arrangements with the stated aim of enhancing 'cohesion, simplicity and industry relevance' (ANTA 1997a, p.7). The National Training Framework builds on the National Framework for Recognition of Training (NFROT) as well as arrangements for recognition of

prior learning (RPL) and the implementation of competency-based training (CBT). It is designed to provide the infrastructure for a co-ordinated national strategy which, according to Moran, aims to:

- equip Australians for the world of work
- enhance mobility in the labour market
- achieve equitable outcomes
- maximise the value of public expenditure on VET (Moran 1997b, pp. 3–4)

Whilst stressing that these broad goals have been provisionally accepted by the national council of State and federal ministers for education and training, he also concedes that the change and implementation processes are neither easy nor without significant tensions.

> *There are constraints on the rate of change in providers which means that providers often feel threatened by the need for change and find it difficult to achieve change in the timelines that those sitting outside the providers think are reasonable. There are also challenges arising from technology.*
>
> (Moran 1997b, p.4)

Throughout many conference presentations and papers, particularly those from policy-makers, the sense of urgency is almost tangible. Hornery suggests that without:

> *. . . a willingness to pick up the pace of change in vocational education and training, we will be left to scavenge the crumbs from the tables on which far more affluent nations dine.* (Hornery 1997, p.2)

Hawke (1998) cites research that highlights the way this sense of urgency has its own consequences. He notes that much of the recent policy and reform was launched without any kind of substantive research base. He argues control has been taken from educators—and directed towards enterprises, industry and workplaces—yet such changes have taken place *without a clear understanding of how workplaces operate* and without adequate understanding of workplaces as learning environments.

He notes also that the research showed the *extraordinarily high turnover* of VET decision-makers from senior and middle management ranks, with many coming from outside the field. He raises concerns about how the decision-makers become informed about the field they are managing. This research

illustrates how the national government, its decision-making structures and personnel cannot stand outside the socio-cultural and economic pressures. It appears that the changing times create their own imperatives and generate their own momentum. This momentum is variously characterised in the literature as representing exciting opportunities for change (Harmsworth 1997) and as a threat to valued traditions and practices (May 1997). Both perceptions are valid. Perhaps the most significant danger is that the waves of change may be overwhelming, not allowing sufficient time for considered research, reflection and analysis. It is anxiety about the lack of opportunity for such processes that prompts Theobald (1997, p.12) to suggest: 'The danger is visible every time a politician, businessman, or academic announces that we must move in a particular direction because there are no choices'.

From a national policy perspective it might now be argued that there are more choices available than before. The national training packages, with both endorsed and non-endorsed components, provide both scope and the challenge for VET educators to make choices. The endorsed components of the packages will provide benchmarks and assessment frameworks to ensure rigour, credibility and transferability in training outcomes. The endorsed components might be thought of as representing the 'exit' gates from training. However, there may be many possible paths to the gates and multiple ways to develop and demonstrate the required competencies. Freed from the constraints of having to use nationally endorsed curriculum, the choice is there for VET practitioners to develop programs that are more responsive to the apparent needs.

States' perspective

The States, with their statutory responsibilities for VET, now find they are managing complex and, at times, even contradictory roles. They may be both a regulator and competitor within the market, leading to particular tensions (Graham 1997). The State may be a service provider and, increasingly, a purchaser of services from providers subcontracting to deliver government services. State VET managers may find themselves working on the one hand as change agents, on the other as conservationists striving to retain the best of established systems.

While VET systems move towards more open market and demand-driven approaches, the State managers also strive to retain effective co-ordination, promote networks between providers, both public and private, and ensure

value for the public funds expended. Here too there are tensions: certain forms of duplication may be unnecessary from the stance of public planning and funding, yet free market principles tend to support product diversification and 'badging' of programs to highlight differences between programs and services which may not be fundamentally different at all.

At one level the evolution of the national system implies a degree of national co-operation, consensus and uniformity. However, even where States are fully committed to the overall national directions they retain their own imperatives for policy, funding and program delivery. This is evident, for instance, in areas of industry policy where recent debates over tariffs and industry protection have highlighted State and federal tensions. The new arrangements also enhance the potential for competition between the States as the open market 'dissolves' the State borders (Paterson 1997, p.5).

At the operational level the States also have challenges in assuring quality, through diverse and devolved networks of providers. Many of the prevailing frameworks for quality assurance have evolved from manufacturing contexts and are not entirely appropriate for educational activities (see, for instance, Jackson 1996). Work is proceeding at national and State levels to address quality assurance issues, principally through attention to provider registration processes (ANTA 1997a, 1997b; Paterson 1997, p.5). The concern with quality is tied to the States' broader legislative, strategic and public planning responsibilities for managing diversity (OTFE 1998) and protecting the rights of those who may be disadvantaged or vulnerable to exploitation.

The case of youth might be cited as just one example of the latter. For instance, McClelland et al. (1997) and Sweet (1996a, 1996b) highlight the extent to which young people may be put at risk by the changing nature of the labour market. The former researchers report a significant minority of young people in 'marginal activities', which placed them either outside the labour market or on its fringes, with only part-time education or training. In 1996 this group represented almost 15 per cent of the 15 to 19-year-old population (McClelland et al. 1997, pp.4–5). Sweet stresses that employment for youth is characterised by its temporary, casual and part-time nature. He also reports that many traditional entry points for young people have been closed off by labour market trends. He suggests there has been *a flurry of reports and programs* to address youth employment and training needs.

> *Yet little has changed: . . . despite the holy trinity of Finn, Carmichael and Mayer and despite ANTA and AVTS. Apprenticeship numbers are still 40 000 short of their June 1990 peak.* (Sweet 1996a, p.1)

Traineeships have so far failed to address the resulting shortfall and the needs of youth represent a significant challenge for public policy and program provision that falls, in large measure, to the States.

Regional/localised policy and planning

Another finding is the strategic importance of regional and more localised planning processes. For instance, Kilpatrick and Bell (1998) stress that even in these 'new times' it is still the case that two-thirds of Australia's exports are generated outside capital cities. They note that over 37 per cent of the population live outside capital cities and that rural Australia faces a crisis. Rural Australians, they report, are statistically more likely to be under-educated, unemployed, or working in small business or self-employed; they are also more likely to be working in lower skilled occupations.

They stress, however, that the VET market in rural Australia is unlike that in the capital cities. There is often not a tradition of VET nor a history or local culture which values education. The markets are 'thin', challenging the viability of policies promoting user choice. The number and quality of teachers, trainers and assessors can be a problem, as are the costs of training and the measurement of effectiveness. They stress the importance of regional planning initiatives and suggest the success of the adult community education (ACE) sector in rural communities is in part due to its strengths in regional planning and funding arrangements.

Similar findings are also reported by Golding and Volkoff (1997a, 1997b, 1997c; Volkoff & Golding 1997) considering the outcomes of VET programs through a major longitudinal study. Their analysis highlights the way VET participants:

> *. . . do not start from the same point in terms of their previous education and training, work experience, family background or socio-economic status. Some stand to gain or lose more than others if treated equally in the VET participation process.* (Golding & Volkoff 1997c, p.1)

Their work shows how some VET clients, or potential clients, are multiply disadvantaged through membership of different overlapping demographic categories. They highlight the need to consider local, regional and community

circumstances in VET planning and program delivery. Butler and Lawrence (1996) similarly argue that community is 'a key factor' that should be included 'along with industry as both "client" and mediator', particularly in rural and remote areas (p.3).

It was noted earlier that Billett et al. identified community/regions as one of the key clients of the VET system. They report that:

> . . . *communities and regions may* not *be best served by a centralised and market based approach. Recall Schofield's statement that State and national labour market and training planning is simply not sensitive enough to pick up small scale and localised demand deriving from local circumstances and which may not coincide with State or national training priorities.* (Billett et al. 1997, p.6)

Falk (1997) and Kilpatrick, Bell and Falk (1998) also report similar findings. The value of localised developments is also highlighted by Theobald (1997) and by Childs and Wagner (1998).

Enterprise's perspective

The popular business rhetoric on the survival of enterprises in these 'new times' is that they must become 'learning organisations'. See, for instance, the Review of Research in this series (Hager 1997), or Watkins and Marsick (1990, 1993), Sharrat and Field (1993), Field and Ford (1995), Sefton et al. (1995), Harris and Volet (1997). This body of literature suggests that learning organisations must adapt, learn-to-learn and develop multi-skilled staff able to solve problems and remain flexible in their responses to the market. Peters (1994) calls for crazy organisations in response to crazy times. Such organisations may correspond to those of Toffler's 'third wave', businesses swift on their feet and based on or utilising the new technologies of the digital revolution (Toffler & Toffler 1980; Toffler 1998).

On the other hand, Toffler also points out that whilst the third wave organisations are evolving, often at rapid pace, there are still businesses of the 'second wave' (or 'smokestack') industrial revolution working in the economy. Such businesses may have more traditional training and learning requirements and may be several developmental steps away from embracing the new technologies.

Despite these variations, it is apparent that where enterprises do recognise the need for learning they almost invariably want programs which address their

particular concerns. The shift to a 'demand'-driven system implies the imperative to address those elements of the enterprise—its work processes, personnel, technology, systems of organisation and administration and so on—which are unique. As Virgona states:

> *The industry standards weight skills, prioritise processes and profile elements using some generic dip stick based on the way things usually happen in industry. But nowhere ever seems to be usual.* (Virgona 1996, p.25)

This development of context-based curriculum can go beyond merely customising existing curriculum as it is imported into an organisation. Sefton et al. (1994), Waterhouse (1996) and Virgona et al. (1998) describe how the range of elements intrinsic to a workplace can be harnessed to develop integrated programs, which although context based, are not characterised by functional reductionism.

Thus there are sound educational imperatives which *may* coincide with the 'demands' being expressed. However, it is naive to assume that an appropriate educational agenda will *necessarily* coincide with the expression of enterprise or individual needs. Commenting upon the demand-driven market, Billett et. al. note:

> *. . . responsiveness to the demand side of the training market may not be supportive of the State's overall goal of maintaining an appropriate level of skill in the State's workforce . . . Career pathways may not be readily found in arrangements which are wholly demand-side responsive.*
>
> (Billett et al. 1997, p.10)

Whilst they emphasise that *the evidence emerging about the changing nature of work suggests that it is increasingly likely to demand forms of knowledge which are situated in the particular enterprise,* they also stress that the specific enterprise focus needs to be mediated by individual, regional and industry needs. Such needs present opportunities for VET educators to play critical and far-sighted roles as mediators and negotiators. This finding is highlighted by research reporting on employers' perceptions of technical and further education (TAFE). Werner reports on over 2600 interview responses to a national survey on employers' perceptions of how well the VET system serves their industry's needs. The researcher concludes that:

> *Overall the survey results show that the majority of employers are satisfied with the VET system, along with the majority of each employer organisational size category, and from each industry sector.* (Werner 1998, p.10)

However, it should also be noted that 24 per cent reported that VET teachers had 'some teaching ability but little industry experience'. A further two per cent reported 'minimal teaching ability and no recent industry experience' whilst 11 per cent responded 'can't say'. These responses hardly constitute a glowing endorsement. The employers also suggested improvements to VET, with major thrusts towards 'more practical training, work experience or on-the-job training and suggestions to make training specific, relevant and focussed on industry needs' (p. 9). Employers also commented on the need for improvements in graduates' work ethic and graduates' abilities to work and cope with setbacks, (the implication being that it is the VET provider's task to address these problems).

Another significant point to note about this study was its scope. This was defined as employers with an employee graduate from a VET course of 200 hours or more, employed by the company within the last two years. It is notable that of the 76 860 employers contacted, 61.7 per cent were out of scope and, for a further 16.7 per cent, scope could not be determined due to refusals, lack of availability etc. Therefore, only 21.6 per cent of the employers contacted fell within the scope of this study. This in itself is a significant finding, given the relatively large original sample. The research findings are based on interviews with 16.2 per cent of the employers contacted.

Employer commitment to VET is still far from universal; various researchers report the reluctance of many enterprises to embrace training as a developmental strategy. See, for instance, Billet and Cooper (1997), Misko (1996) and Allen Consulting Group (1994).

30

Addressing concerns about learning, workplaces and public policy, Hawke analyses the results of four key research projects. He argues that the role of workplaces and enterprises within VET is still far from clear cut:

> *Firstly* [the research] *indicates clearly that we are operating in a domain in which complexity and variability is the dominant feature. It is simply not the simple policy issue which appears to be assumed by most current policy processes . . . Secondly, workplaces are not clear about what role they want to play . . . and are equally unclear about what they can properly expect to obtain from any involvement . . . Finally, policy-makers are unclear about what they want workplaces to do.* (Hawke 1998, pp.6–7)

Research by Field (1997), Baker and Wooden (eds) (1995), Billett and Cooper (1997) and Childs and Wagner (1998) also suggests VET has a long way to go in

addressing the needs of small and micro businesses. The latter researchers provide an overview of a series of studies with smaller enterprises. They summarise their findings as follows:

1 *The VET sector has difficulty recognising social, political and organisational knowledge or knowledge that lies outside orthodox viewpoints.*

2 *The complexity of work-based learning and its organisational, political and social context cannot be reflected in 'training'.*

3 *VET conceptual development is based on an approach limited to individual competence which conflicts with the concept of the learning organisation, collaboration and work-based teams.*

4 *VET conceptual development is based on an assumption that training is a key element in enterprise development. This conflicts with research data available for small and medium enterprises.*

5 *VET providers tend to equate their organisational interests (for example, their training product) with the needs of the client.*

6 *The complexity of learning outcomes is related to the complexity of learning environments.*

7 *Cost-benefit analysis models used by the VET sector continue to fail to include such factors as regional economic well-being, social cohesion and the cost-benefit to communities of enterprise developments, all significant issues when analysing cost-benefits within a social model of economics.*

(Childs & Wagner 1998, pp.5–6)

Their final point, on the importance of taking into account regional perspectives, also reinforces findings reported earlier.

Provider's perspective

Some research reports the challenges for VET providers in the current context. Seddon (1994) shows how the context is rich and in some respects problematic. Along with colleagues she has made a detailed study of the contextual issues and the pressures being placed upon the VET system (Seddon 1997, 1998; Seddon et al. 1997). They argue that the shifts observed constitute no less than a substantial 'remaking' of VET which involves 'a profound redesign; with not only a restructuring but also a reorganisation and renorming, of education and training' (Seddon et al. 1997). It is clear that the VET sector is not immune to the stressful effects of change and restructuring.

> *There has been an underpinning shift in norms, values and purposes . . . it is ludicrous to argue that the nature of work in TAFE—for teachers, managers and support staff—has not become more complex and demanding.*
>
> (Angus, cited by Seddon 1998, p.10)

Seddon reports that the related concerns are not unique to Australia and that these shifting expectations have fuelled a debate about the extent to which they represent a deprofessionalisation or a reprofessionalisation of teachers' work (Seddon 1997). She highlights the extent to which the new expectations require a *remaking* of teachers. She identifies three groups of teachers and managers, classifying them by their response to the new expectations. There are those who *take up the rhetoric of training reform and commercialisation* and become advocates for reform. Secondly, there are those who resist change and cling to traditional public service values, some even referring to themselves as *dinosaurs*. The third group Seddon characterises as *capacity builders*.

> *They attend to 'new times', seek to contextualise themselves and their work in relation to new pressures and demands, and to develop practices which accommodate both innovation and valued tradition . . . our study suggests that the most significant force for change in TAFE today is not government, policy-makers or comprador managers in TAFE. Rather it is those TAFE teachers and managers who have taken up capacity building agendas.* (Seddon 1998, p.4)

Seddon emphasises the importance of supporting these 'capacity builders' within the VET system. She is not alone in highlighting this need. Billett et al. (1997), Waterhouse and Sefton (1997), Delaney (1996), Ahern et al. (1995), Kelleher and Murray (1995), Kell (1997) and others highlight the challenges for, and needs of, those engaged in these remaking processes. Deakin speaks as a practitioner at the coalface and notes that teachers who undertake this type of education have to be able to deal with complex and contradictory contexts. She argues the criteria of effective performance,

> *. . . include their tolerance of ambiguity, uncertainty and change, their capacity for risk taking and for innovation, their ability to teach across many technical areas, their political savvy and awareness of many cultures (Gee 1990), both organisational and social, operating in the workplace.* (Deakin 1996, p.9)

Deakin also highlights the multiple roles practitioners may be called upon to play and the need to mediate *stakeholders' needs without being limited by contextual functionalism*. Not least amongst all these challenges is the need for

teachers to utilise their professional skills to enthuse trainees, wherever they may be, with the desire and confidence to learn.

Summary

The changes in the nature and patterns of work suggest complex challenges for VET systems and practitioners. Even though broad trends and patterns may be identified, they cannot be assumed at each level. In some areas they may be found to be non-existent, or contradictory patterns may be apparent. The complexity and lack of consistency suggests the need for diversity and creativity in responses at various points throughout the system. They also suggest the need for tolerance of difference and even contradiction. Handy (1995) notes that our current times are characterised by paradox and uncertainty. He suggests these paradoxes cannot always be resolved; they need to be recognised, analysed and, if necessary, accommodated, a bit *like the weather*. Such skills of recognition, analysis and adaptability are needed at all levels within the VET system. There is evidence that VET systems are responding to the multiple shifts. The responses are considered too slow for some and too hasty and ill thought through by others.

Changes in educational practice

Educational implications of changing context

THE EDUCATIONAL IMPLICATIONS of the changes outlined above are considerable. They are the focus of a growing body of literature that reflects interest in the links between education and the worlds of work. The references listed in this review include not only more specific research papers and articles, but also several recent book publications exploring these wider themes. Previous reviews in this series have also identified relevant material—see, for instance, Hall (1996) on *Work and training*, Misko's (1994) review on *Learning styles* in VET, also Hager (1997) and Billett and Cooper (1997).

Comprehensive analysis of the diversity of educational practices in relation to the changing context for VET would require a more substantial review. Even a cursory overview suggests a wide range of educational concepts, practices and responses that could be considered. For each of these, a body of literature is evolving. The following overview is not intended to be exhaustive and the references are not exclusive in their focus.

These educational practices (and their related acronyms) have become part of the language and practice of VET. They are embedded in policy directives at national, State and provider levels. In every case a cogent argument can be developed for their value and effectiveness, *given certain conditions or circumstances*. The key point to be made in relation to all of these practices is that each *may* play a valuable role in developing appropriate educational responses to the demands of these 'new times'. Each carries the potential to facilitate educational effectiveness, yet none of these practices in themselves represent a panacea or universal strategy.

Educational practices	References
Competency-based training (CBT)	Sanguinetti (1994) Hall (ed.) (1995) Mulcahy (1996) Harper (1996) Smith et al. (1997)
Key competencies and integrated approaches	Mayer (1992) Stevenson (ed.) (1996) Down (1993) Australian Competency Research Centre (1997) Courtenay & Mawer (1995) Sefton et al. (1994)
Flexible delivery, new technologies, teaching and learning on-line (TALON)	Kearns (1997) Harmsworth (1997) Spark et al. (1995)
Experiential, problem-based and action learning strategies	Ballantyne et al. (1993) Kolb (1984) Kemmis & McTaggart (eds) (1988)
Recognition of prior learning (RPL)	Golding et al. (1995) Hager (1998) Smith et al. (1997)
Mentoring and coaching	Kelleher & Murray (1995) Ahern et al. (1995)
Competencies in context, context-based curriculum	Darrah (1994) Billett (1994) Stevenson (ed.) (1996) Sefton et al. (1994)
Best practice and Benchmarking for Educational Effectiveness Programs (BEEP)	Kiraly & Siat (eds)(1997) Virgona et al. (1998) Virgona & Marshall (1998)

CBT, for instance, has been one of the central planks of the training reform agenda. Smith and colleagues (1997) conducted a project to evaluate the effects of CBT and RPL on teaching and learning and on the role of VET teachers and trainers. Key points to emerge are the following:

- CBT and RPL are not monolithic but have manifested in diverse ways with disparate effects; the study found *there is no generally agreed definition of CBT.*
- *There were differences in acceptance, interpretation and implementation between particular providers, and even among teachers/trainers at the same site.*
- *CBT has been implemented in a variety of ways which have had a differential impact upon teaching and learning.*

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- The study identified 14 features of CBT, not all sites embraced all features, those closest to industry were *least* likely to do so and *tended to use fewer CBT features, selecting only those which suited the needs of their particular clients.*
- The researchers note that the transition (to CBT) *has sometimes been long and fraught with uncertainty and tension.*
- They identified both advantages and disadvantages to *flexible entry/exit* and *self-paced* approaches.
- The study identified concerns with modularisation, lack of curriculum content, the perceived minimal nature of standards, and confusion about industry standards and learning outcomes.

The researchers note: 'There is little agreement, and almost no evidence, about whether students' skills and knowledge have improved under CBT' (Smith et al. 1997).

These findings are not inconsistent with those of some other studies (see Mulcahy 1996; Sanguinetti 1994; Harper 1996). At the time of writing, Mulcahy and colleagues have been funded for a major study to further investigate the impact and effectiveness of CBT.

Smith et al. also note that RPL has not had the take-up and the impact which might have been expected. They recommend specific investigations of RPL with students who have received it. Given that relatively few students appear to have taken up and benefitted from RPL, it may be more fruitful to investigate the implementation of RPL policies, systems and processes to determine why this may be the case. Hager (1997, 1998) discusses the importance of informal learning and points to some of the challenges for VET in recognising informal learning. Such learning, he suggests, is often different from the kind of learning traditionally valued in formal education contexts. The implications for RPL policy and practice are yet to be fully explored.

There are vigorous arguments surrounding all of these VET practices. For instance, new communication technologies undoubtedly offer tremendous *potential* for enhancing access to education for many learners. See the Review of Research in this series by Kearns (1997) also Harmsworth (1997). However, Jakupec and McTaggart (1996) suggest that flexible delivery strategies, despite the new technologies, have so far failed to live up to the promises of access and equity. Beckett (1997) expresses reservations about the limitations of flexible

delivery. Merriam (1996) cites research which suggests that new technologies may be exacerbating existing inequalities; disadvantaging those least able to exploit them, whilst further empowering those already relatively privileged. Kilpatrick and Bell (1998) also report similar reservations.

Carmichael (1996) chaired a substantial review (by the Employment and Skills Formation Council) into the convergence of information and communication technologies and the implications for VET. Once again the issues of access and equity were highlighted, along with significant research questions relating to communication technologies and teaching–learning processes. The council recommended the development of a five-year strategy to develop a coherent and consistent national response to the issues identified. The primary emphasis would be on supporting improvements in learning and its links with work.

Research conducted by Darrah (1994), Billett (1994), Brice-Heath (1990), Lave and Wenger (1991), Jackson (1994) and Stevenson (ed.) (1996) suggests the need to rethink workplace skills and everyday competencies, such as reading and writing. Competencies, when carefully considered in context, are both subtle and complex in ways that may not be reflected in simple or generic descriptions. The social and collective nature of competence is also often not reflected in the individualistic approaches that underpin many training needs analysis and curriculum design processes. Sensitive identification, analysis and teaching of skills within the particular context in which they are being used enables learners to have their understanding reflected in the curriculum. They are then better able to recognise and grasp the particular requirements necessary to demonstrate competence within their circumstances. There is substantial evidence then for the value of richly contextualised curriculum. Such approaches promote relevance, immediacy and direct application of learning. Yet without the mediating influence of wider industry, social and individual learner concerns even this finely contextualised and well-grounded focus could be short sighted. Learners also need to extend their horizons and stretch their capacities beyond the immediate context.

Even the concept of *best practice* is not as simple and straightforward as it might appear. In changing times best practice becomes a moving target; today's best may not be good enough even for tomorrow. Furthermore, what is defined as best will always be shaped by the values of those making the definitions (Virgona & Marshall 1998; Virgona et al. 1998). *Best practice* is offered as a guide for others to follow and as Crudden (ed.) (1992) notes, 'with reference to the mapping exercise . . . it matters considerably who makes the maps'.

Analysis and commentary

Appropriate educational responses

THE QUESTION BEING posed here is whether these various educational practices are appropriate, given the context and the changing nature and patterns of work in Australia. The answer lies not in a blanket assurance to the affirmative, but in careful analysis of the particular circumstances where educational intervention or program development is being considered. As Stevenson notes:

> *The kind of knowledge that is needed for work in such changing economic circumstances is especially problematic. That is, the kind of knowledge that one needs depends on the extent to which such qualitative changes have occurred in that part of the economy, the role that one plays in economic productivity and the extent to which that role is core or peripheral.* (Stevenson 1998, p.5)

Individual, community, enterprise and industry needs

The wider implications of the changing patterns in work and vocations are evident in well-informed calls for 'lifelong learning', learning communities and learning organisations. Couched in such generalities the educational needs appear to be obvious: critical thinking skills and metacognition, or learning-to-learn skills; sophisticated literacy, communication and problem-solving abilities; and skills in managing change, including the capacity to live happily with ambiguity, contradiction and paradox.

There is also the need for 'consumer education' for VET consumers. The learners in the market may not know what they want. And even when the

'customers' can articulate their demands they may ask for what they know best, rather than what might be most appropriate for their educational needs.

The real challenges for VET practitioners, curriculum designers and policy-makers come in moving beyond the generalities and the rhetoric. Particular communities require particular interventions and innovations, whether they are communities within enterprise or industry settings; in rural or metropolitan Australia; whether they are of indigenous or immigrant heritage. In each case, VET responses must 'fit' if they are to be claimed by those communities and fully developed.

Managing the tension within VET systems between broader policy objectives and more localised concerns and needs is a fundamental challenge highlighted by the literature. The 'urgency imperative' is often couched in terms of global concerns and the national good. Yet teaching and learning processes, if they are to be effective, must be meaningful for the individuals involved, in their settings. This fundamental challenge is related to that of managing and addressing the genuine needs of multiple stakeholders. The non-endorsed components of the national training packages may, if used creatively, provide effective means to respond to the needs at the local level, whilst still maintaining fidelity with national credentials.

Blending formal and informal, organisational and collective learning

While the training reform agenda emphasised the importance of linking formal learning with the tasks and expectations of the workplace, this has proved difficult to achieve. In particular, young workers have reported difficulties in matching their formal training with their workplace experience, and have emphasised strongly the value that they have placed on learning on the job. Yet not all workplaces are well situated to cultivate positive learning experiences for workers, young or old.

More seriously, perhaps, the scale of investment in technical and further education institutions has meant that the major focus of policy has continued to be on formal (and pre-vocational) provision for individuals. There is a pressing need for a more holistic and integrated policy perspective, which would link education and training programs more directly with workplace

experience, enterprise and industry development, and regional/community needs. Effective regional planning structures and creative use of training packages at the local level could help to foster a national system of knowledge generation and innovation.

The focus in Australia on providing formal training external to (or in preparation for) the workplace has also obscured the growing attention placed on organisational learning, as a key element of directing and sustaining organisational change. While there have been sharp divergences amongst practitioners adopting different orientations to organisational learning, there has been widespread interest and investment in strategies to foster a more collective approach to learning in both private and public sector organisations. This has been regarded as a necessary element of efforts to generate innovation and achieve organisational objectives. The knowledge generated from collective experience is the critical ingredient for innovation, whether incremental or transformational.

Findings and directions for further research

Findings

> *Thus it does not make sense to argue that there is a single set of forces at work in the economy impacting on work in a homogeneous way; nor to argue that the qualitative impact on the capacities needed for productive work is uniform. Rather, it seems that gaps are widening between the few called upon to be creative and innovative in generating new ideas about technology, commerce and production and the many either without work or working under diminished social conditions.* (Stevenson 1998, p.7)

THE THEMES OF complexity, contradiction and gaps are evident throughout the literature. There appear to be no universal or simple VET responses to these widespread and far-reaching socio-economic and cultural shifts. There are issues of access, equity and opportunity that are as much political and sociological as they are educational. The shifts pose fundamental questions for VET. As Kress (1995) points out, curriculum design is about future building. Whilst debate will inevitably continue about the shape of desired futures, it is arguable that a kind of paradigm shift is required for VET.

The required shift appears to be from a focus on delivery of predetermined training content to more messy and complex processes of mediation, dialogue and designing for learning. Such processes need to involve the full range of stakeholders. If competence is determined in context and homogeneity is largely an illusion, then meaningful VET depends upon effective dialogue. Such conversations require skill, sensitivity and ongoing administrative support. It's no longer simply a matter of delivering the package. The demands involved in the re-making of TAFE suggest the need for practitioners skilled at mediating divergent needs, and designing and implementing creative educational responses. Longer-term collaborative relationships also seem important in gaining stakeholder involvement and generating local

'ownership'. In this context, moves to de-skill, outsource, contract and casualise VET work appear to run counter to the needs. This is just one example where the VET dance may be out of step with the music.

It is cause for concern also that some of the apparent shifts in employment patterns appear to correspond in some ways to areas in which VET does not have a particularly well-established record. For instance, women are under-represented in many areas of VET programs. Yet, overall, the workforce has become increasingly feminised. Small and micro-businesses are providing expanding employment opportunities, whilst larger businesses are shedding staff. Yet VET provision, on the whole, is more geared to the latter and struggling to respond effectively to the former. Rural communities have a critical need for innovative VET interventions. Yet they are less serviced and relatively less well situated to adopt new technologies to enhance their access.

Also, the VET sector itself does not stand outside the changing patterns described. Interestingly, VET is rarely described as an industry and VET personnel are rarely discussed as workers. Yet it is apparent that as an industry VET is itself undergoing significant change. Contract and casual forms of employment are becoming more the norm at all levels, from senior policy advisors and decision-makers through to staff employed at local providers. The implications of changes in the structure and nature of VET work are yet to be fully felt. It may reasonably be anticipated that there will be implications, for longer-term strategic planning, for access and equity, staff development, curriculum design and program development and, ultimately, for the quality of student provision.

Research on the VET responses to these changing times suggests that obvious strategies are often not as simple as they may at first appear. For instance, many issues regarding workplaces as learning environments are yet to be explored; the new technologies have not yet provided the answers, whilst they raise new questions. Despite national imperatives and policy directives, State authorities retain their own more immediate concerns and this may be even more the case when looking at regional and local needs. The idea of a pathway from education into employment seems relatively simple and straightforward. It implies that all individuals need to do is stay on the path and not get lost. Research suggests that education to work transitions are complex, variable, ambiguous and difficult to predict.

This review also notes that vocational imperatives have assumed increasing importance in driving VET at a time when the concept of vocation itself is changing and under question (Theobald 1997; Handy 1995; Collins 1991). There is also a 'darker side' to workplace reform. Increasing work intensification is evident for some workers and larger numbers are unemployed, underemployed or having their work contracted, casualised or outsourced in various ways. (See, for instance, O'Donnell 1997; Heiler 1997; Campbell 1996). As the structures and patterns change, the growing social and economic gaps between the income of the rich and the poor continue (Raskall 1993) and the relationship between work and well-being becomes increasingly problematic.

Directions

Four key issues emerge as possible focal points for the development of further research questions and deeper investigation.

Developing learning communities

Predominant concerns about *international* competitiveness and the evolution of a *national* VET system can seem to overwhelm what is important at the local or regional level. Unless local needs can be couched in terms of national imperatives, they are in danger of being overlooked in the current climate. Yet much of the research suggests VET programs, if they are to be effective, need to be 'owned' at the local level. It would appear that for national (or State) policies to be effective they need to be made meaningful and relevant at the local level—with the engagement of multiple stakeholders.

This suggests the need for further research on the nature of learning communities (Falk 1997) and the relationships between VET and community development. What characterises an effective learning community and how might such communities be developed? What strategic interventions are required to stimulate the development of such communities? What are the resource and policy implications? How can regional, local and community needs be identified and expressed as 'demand' in ways that will stimulate appropriate 'supply' in the VET market? Such research, if designed carefully and conducted sensitively, could also shed light on appropriate strategies to address issues of access and equity touched upon in this review.

Collective competence

A related point concerns notions of collective competence and the social and interactive nature of skills in context. It may be that individual competencies are not the most important outcomes. The ability of groups of people to work together effectively may be even more important. Collective competence implies a range of skills within a group and the group's ability to identify and harness effectively the particular skills (or groups of skills) for any given circumstance. Having everybody within the team equally competent, with the same competencies, may not be particularly helpful. Group or team competence is important in workplace communities as it is anywhere else.

The social and collective nature of competence also suggests further research questions. Is it possible to identify the features of collective competence in action? How is it manifested in various settings, such as communities and workplaces? What is the relationship between individual competencies and group, or collective, performance? Is it merely a matter of summation, the total of skills represents the performance level achieved—or is there evidence of synergy, the whole appearing greater than the sum of the parts? If social and collective competence is important, what are the implications for teaching strategies based on individualised conceptions of the learner and competence?

Workplace learning

One broad implication of the findings of this review is that many workplaces need to become (if they are not already) effective learning environments. The literature suggests there are still significant issues to explore in the field of workplace learning. The sorts of links suggested by Nonaka and Takeuchi (1995) could be explored in Australian contexts. For instance, what evidence is there of a symbiotic relationship between knowledge generation and innovation at the enterprise level? Are there Australian companies demonstrating such connections? Are such connections apparent only in the 'third wave' enterprises which Toffler mentions, or is there scope for such innovation in more traditional companies and industries?

There is a need for further work to document how Australian workplaces function as learning environments. What stimulates and sustains effective organisational and collective learning at enterprise level and what are the barriers? How might the barriers be best overcome? How do the key competencies manifest themselves in workplaces and how do they affect the

operation of teams and more autonomous forms of work organisation? To what extent is collective competence evident in workplaces? Detailed ethnographic-type studies exploring the culture of Australian workplaces as sites for learning would help to answer such questions.

Such investigations would also shed more light on what appears to be a significant issue—the nature of informal, incidental and opportunistic learning. There are suggestions that in some contexts these dimensions of learning may be more significant than formal training. Better understanding and recognition of informal learning processes could also be crucial in supporting smaller and micro-businesses. Here the suggestion is that VET might need to make a significant paradigm shift if programs and services are to provide the kind of support required by smaller businesses. Action research approaches would offer effective methodologies to address these issues in collaborative work with people engaged in small and micro-businesses.

Implications for VET

As a service industry VET faces a double bind in addressing the challenges of these 'new times'. On the one hand there is the expectation that VET providers should be able to provide training, expertise, consultancy services and so on, to the many other businesses which look to VET for support—including help with the difficult processes of managing change. On the other hand, the VET sector does not stand outside the wider social, political and economic processes driving the changes. The pressures being experienced by other businesses are also being experienced within the VET sector. In short, VET has its own house to tend.

In this context it is not yet clear how wider trends and changes in the labour market are going to affect VET work and VET workers. What will be the long-term effect of trends towards casualisation of VET teachers' employment? How are career paths, terms and conditions of employment and labour mobility affected by individual employment contracts for VET workers? Is there evidence of work intensification in the VET sector and, if so, how is it manifested? What are its implications? Is there a relationship between the quality of VET programs and the modes of employment? What are the implications of project and portfolio working lifestyles for ongoing professional development for VET workers? These and many other related questions need to be considered.

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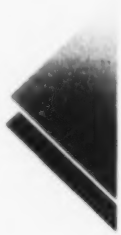
This review of research is one of a series of reports commissioned to draw conclusions from the research on key topics in vocational education and training.

Peter Waterhouse, Bruce Wilson and Peter Ewer bring to this review many years of collective practice and research in the fields of VET, labour market analysis and public policy. Their analysis and findings have widespread implications for those involved in diverse aspects of VET, workplace change, industrial reform and restructuring processes.



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